

IN THE CLAIMS:

This listing of the claims replaces all prior versions and listings of the claims in this application.

The text of all pending claims (including any withdrawn claims) is set forth below.

Canceled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered).

Please AMEND claims 7 and 12 in accordance with the following:

1. (Previously presented) An organic electroluminescent device comprising:
a substrate;
a first electrode to define a pixel region formed on the substrate;
multiple organic film layers to perform light emission formed on the first electrode; and
a second electrode formed on the multiple organic film layers;
wherein the multiple organic film layers comprise:
an emitting layer;
a hole injection layer comprising an electron acceptor material; and
a hole transport layer comprising the electron acceptor material.

2. (Previously presented) The organic electroluminescent device according to claim 1, wherein the electron acceptor material is selected from the group consisting of:
an aromatic compound having a nitro group or a cyano group;
an olefin compound having a nitro group or a cyano group;
a perylene compound having a nitro group or a cyano group;
a heterocyclic compound having a nitro group or a cyano group;
2,4,7-trinitrofluorenone;
2,4-dinitroaniline;
5-nitroanthranilonitrile
2,4-dinitrodiphenylamine

1,5-dinitronaphthalene; and

3,5-dinitrobenzonitrile.

3. (Previously presented) The organic electroluminescent device according to claim 1, wherein the electron acceptor material constitutes 0.01 to 10 wt.% of a total weight of the hole injection layer and of the hole transport layer.

4. (Previously presented) The organic electroluminescent device according to claim 1, wherein the multiple organic film layers further comprise at least one layer selected from a hole-blocking layer, an electron injection layer, and an electron transport layer.

5. (Previously presented) The organic electroluminescent device according to claim 1, wherein a thickness of the hole injection layer and of the hole transport layer is 1 to 4,000 Å.

6. (Previously presented) The organic electroluminescent device according to claim 4, wherein the at least one layer selected from the hole-blocking layer, the electron injection layer, and the electron transport layer comprises an electron donor material.

7. (Currently amended) The organic electroluminescent device according to claim 6, wherein the electron donor material is selected from the group consisting of:

an aromatic compound having hydrogen, an alkyl group, or a phenyl group; ~~;~~ an NR₂ group, ~~an~~ OR group, or an SiR₃ group;

an olefin compound having hydrogen, an alkyl group, or a phenyl group; ~~;~~ an NR₂ group, ~~an~~ OR group, or an SiR₃ group;

an allene compound having hydrogen, an alkyl group, or a phenyl group; ~~;~~ an NR₂ group, ~~an~~ OR group, or an SiR₃ group;

a thiophene compound having hydrogen, an alkyl group, or a phenyl group; ~~;~~ an NR₂ group, ~~an~~ OR group, or an SiR₃ group;

a fulvalene heterocyclic compound having hydrogen, an alkyl group, or a phenyl group; ~~;~~ an NR₂ group, ~~an~~ OR group, or an SiR₃ group;

poly(3,4-ethylene-dioxythiophene);

tetraphenylethylene;

azulene;
1,2,3,4-tetraphenyl-1,3-cyclophenetadiene; and
bis(ethylenedithio)tetrathiafulvalene.

8. (Previously presented) The organic electroluminescent device according to claim 6, wherein the electron donor material constitutes 0.01 to 50 wt.% of a total weight of the at least one layer selected from the hole-blocking layer, the electron injection layer, and the electron transport layer.

9. (Previously presented) The organic electroluminescent device according to claim 6, wherein the at least one layer selected from the hole-blocking layer, the electron injection layer, and the electron transport layer are formed by spin-coating, front deposition, or co-deposition.

10. (Previously presented) The organic electroluminescent device according to claim 6, wherein a thickness of the at least one layer selected from the hole-blocking layer, the electron injection layer, and the electron transport layer is 1 to 4,000 Å.

11. (Previously presented) An organic electroluminescent device comprising:
a substrate;
a first electrode to define a pixel region formed on the substrate;
multiple organic film layers to perform light emission formed on the first electrode; and
a second electrode formed on the multiple organic film layers;
wherein the multiple organic film layers comprise:

an emitting layer;
an electron transport layer; and
at least one layer selected from a hole-blocking layer and an electron injection layer; and

wherein the at least one layer selected from the hole-blocking layer and the electron injection layer comprises an electron donor material;

wherein the hole-blocking layer directly contacts the emitting layer.

12. (Currently amended) The organic electroluminescent device according to claim 11, wherein the electron donor material is selected from the group consisting of:

an aromatic compound having hydrogen, an alkyl group, or a phenyl group; ~~an NR₂ group, an OR group, or an SiR₃ group;~~

an olefin compound having hydrogen, an alkyl group, or a phenyl group; ~~an NR₂ group, an OR group, or an SiR₃ group;~~

an allene compound having hydrogen, an alkyl group, or a phenyl group; ~~an NR₂ group, an OR group, or an SiR₃ group;~~

a thiophene compound having hydrogen, an alkyl group, or a phenyl group; ~~an NR₂ group, an OR group, or an SiR₃ group;~~

a fulvalene heterocyclic compound having hydrogen, an alkyl group, or a phenyl group; ~~an NR₂ group, an OR group, or an SiR₃ group;~~

poly(3,4-ethylene-dioxythiophene);

tetraphenylethylene;

azulene;

1,2,3,4-tetraphenyl-1,3-cyclophentadiene; and

bis(ethylenedithio)tetrathiafulvalene.

13. (Previously presented) The organic electroluminescent device according to claim 11, wherein the electron donor material constitutes 0.01 to 50 wt.% of a total weight of the at least one layer selected from the hole-blocking layer and the electron injection layer.

14. (Previously presented) The organic electroluminescent device according to claim 11, wherein the multiple organic film layers further comprise at least one layer selected from a hole injection layer and a hole transport layer.

15. (Previously presented) The organic electroluminescent device according to claim 11, wherein the at least one layer selected from the hole-blocking layer and the electron injection layer is formed by spin-coating, front deposition, or co-deposition.

16. (Previously presented) The organic electroluminescent device according to claim 11, wherein a thickness of the at least one layer selected from the hole-blocking layer and the electron injection layer is 1 to 4,000 Å.

17. (Canceled)

18. (Previously presented) The organic electroluminescent device according to claim 11, wherein the electron transport layer comprises an electron donor material.

19. (Previously presented) The organic electroluminescent device according to claim 14, wherein the at least one layer selected from the hole injection layer and the hole transport layer comprises an electron acceptor material.

20. (Previously presented) The organic electroluminescent device according to claim 19, wherein the electron acceptor material is selected from the group consisting of:

- an aromatic compound having a nitro group or a cyano group;
- an olefin compound having a nitro group or a cyano group;
- a perylene compound having a nitro group or a cyano group;
- a heterocyclic compound having a nitro group or a cyano group;
- 2,4,7-trinitrofluorenone;
- 2,4-dinitroaniline;
- 5-nitroanthranilonitrile
- 2,4-dinitrodiphenylamine
- 1,5-dinitronaphthalene; and
- 3,5-dinitrobenzonitrile.

21. (Previously presented) An organic electroluminescent device comprising:
a substrate;
a first electrode to define a pixel region formed on the substrate;
multiple organic film layers to perform light emission formed on the first electrode; and
a second electrode formed on the multiple organic film layers;
wherein the multiple organic film layers comprise:

an emitting layer;
a hole-blocking layer;
an electron transporting layer; and
an electron injection layer comprising an electron donor material.

22. (Previously presented) The organic electroluminescent device according to claim 11, wherein the electron transport layer does not comprise an electron donor material.

23. (Previously presented) The organic electroluminescent device according to claim 11, wherein the electron transport layer is a single electron transport layer that is the only electron transport layer in the organic electroluminescent device.

24. (Previously presented) The organic electroluminescent device according to claim 23, wherein one side of the single electron transport layer directly contacts the second electrode, and an opposite side of the single electron transport layer directly contacts the hole-blocking layer.

25. (Previously presented) The organic electroluminescent device according to claim 11, wherein the hole-blocking layer is a single hole-blocking layer that is the only hole-blocking layer in the organic electroluminescent device.